

## INSTALL NOTES FOR 2 APRIL 2004 NWSRFS Release 25

This document includes installation instructions for Release 25 of the NWSRFS software, which will be in AWIPS Release OB4. As of this release, a full installation is only provided for the Linux operating system. Only ofsde is included for installing on HP. For information about the contents of Release 25, please refer to the accompanying release notes.

As part of the install notes, there is a separate section for installing verify, which now accesses the archive database on the ax machines. Other significant changes for this release are replacement of previously used remote access commands (e.g. rsh) with ssh in the script get\_ofs\_data, used in IFP. Make sure to follow the steps to backup of the old version of get\_ofs\_data. All RFCs will have to use the old version until ssh is installed. Also, the ens\_pre program has been updated to read NetCDF files instead of ascii grid files. The NetCDF files will be available on AWIPS with OB3. Therefore, the old version of the ens\_pre must be used until OB3 is installed.

The install notes contain the following sections:

1. [Summary of Steps for Installing the Release](#)
  - [Linux System Installation](#)
  - [Hp Installation](#)
2. [Install Notes for Verify Software on the Archive Machine](#)
3. [Contact Information](#)

=====

SUMMARY OF STEPS FOR INSTALLING THE RELEASE      ([Back to Top](#))

=====

Note that these instructions assume the GCC Shared libraries have already been installed either through AWIPS OB3 or NWSRFS Release 24. Please refer to the Install notes for NWSRFS Release 24 if this is not the case. You will have to first load the shared libraries.

OHD recommends this release of NWSRFS be installed after the AWIPS OB3 installation.

Download the files from the ftp site  
ftp ftp.nws.noaa.gov (205.156.54.206)  
name: anonymous  
password: your email address  
(Use binary transfers.)  
binary  
(Change directories)  
cd oh/nwsrfs/Release25  
(get the files)

```
get lxrfc_ob4-r25_20040317_tar.Z
get lx_install_backup_script_ob4-r25
get INSTALL_nwsrfs_bldOB4-r25.pdf
get RELEASE_nwsrfs_bldOB4-r25.pdf
```

LINUX SYSTEM INSTALLATION      ([Back to Top](#))

-----

These instructions identify the steps necessary to install the upgraded RFC hydrology applications which will be part of AWIPS Release OB4 on the Linux workstations.

## Pre-Install Steps

1. In testing this release some users are finding they have very long path environment variables (\$PATH) which has resulted in the program espadp crashing. In some cases this is the result of sourcing the awips.profile file in the system wide as well as the user profiles. The awips.profile is now sourced in the /etc/profile and therefore it should be removed from all user profiles. Please remove the line  
  
". /awips/hydroapps/lx/public/bin/awips.profile  
  
from all user .profile files.
2. Make sure to install this release on a system running an ob3 version of awips. Installing this release on a system running an OB2 version of awips will produce the following error message "/local/lx/gcc\_shlibs/libstdc++.so.5: no version information available"

NOTE: These instructions assume that the Linux workstation is based upon the Linux disk image supplied by OS&T. If the workstation is using a different version of Linux or has a different file structure, the instructions may need to be modified. The instructions also assume that the Linux workstations have previously had the Release 20 executables installed. The Release 20 instructions contained a number of steps to set up the basic infrastructure needed for the NWSRFS executables.

## Install Steps

1. Back up existing files.

It is very important to back up the ifp scripts so you do not lose any changes you have made to them.

Backup the following files by copying them from their RELEASE directories to the ARCHIVE directories. The script, lx\_install\_backup\_script\_ob4-r25, has been provided as an optional method to perform this backup.

To use the optional backup script, copy the script to the /awips/hydroapps directory and execute it (you need to be just above the "lx" directory).

If you prefer not to use the script, the following steps perform the backup:

Backup the "ofs" programs:

```
cd /awips/hydroapps/lx/rfc/nwsrfs/ofs/bin/RELEASE
cp batchpst      ../ARCHIVE
cp espinit       ../ARCHIVE
cp fcinit        ../ARCHIVE
cp fcst          ../ARCHIVE
cp filecrat      ../ARCHIVE
cp filesize      ../ARCHIVE
cp goesdb        ../ARCHIVE
cp ppdutil       ../ARCHIVE
cp sasmdb        ../ARCHIVE
cp prdutil       ../ARCHIVE
cp shefpost      ../ARCHIVE
cp shefpars      ../ARCHIVE
cp reorder       ../ARCHIVE
```

```
cp ppinit          ../ARCHIVE
```

Backup the "calb" programs:

```
cd /awips/hydroapps/lx/rfc/nwsrfs/calb/bin/RELEASE
cp map             ../ARCHIVE
cp mape            ../ARCHIVE
cp mapx            ../ARCHIVE
cp mat             ../ARCHIVE
cp mcp3            ../ARCHIVE
cp opt3            ../ARCHIVE
cp pxpp            ../ARCHIVE
cp taplot          ../ARCHIVE
```

Backup the "util" programs:

```
cd /awips/hydroapps/lx/rfc/nwsrfs/util/bin/RELEASE
cp create_bas_bound ../ARCHIVE
cp cvtgriddb         ../ARCHIVE
cp get_apps_defaults ../ARCHIVE
cp looknset          ../ARCHIVE
cp utilities.jar      ../ARCHIVE
cp adb.jar           ../ARCHIVE
cp ihfsdb.jar        ../ARCHIVE
cp dbgen.jar         ../ARCHIVE
```

Backup the "ifp" programs:

```
cd /awips/hydroapps/lx/rfc/nwsrfs/ifp/bin/RELEASE
cp IFP_Map           ../ARCHIVE
cp NWSRFS_no_startup ../ARCHIVE
cp bin_to_ss_input   ../ARCHIVE
cp delete_atoms      ../ARCHIVE
cp delete_is_running ../ARCHIVE
cp ifp_nwsrfs        ../ARCHIVE
cp post_default_run_dates ../ARCHIVE
cp sacsnow.jar       ../ARCHIVE
cp seg_sort          ../ARCHIVE
cp parse_mods_by_segment ../ARCHIVE
cp print_prop        ../ARCHIVE
cp set_dates         ../ARCHIVE
cp startifp_done     ../ARCHIVE
cp working_dialog    ../ARCHIVE
```

Backup the "ifp" scripts:

```
cd /awips/hydroapps/lx/rfc/nwsrfs/ifp/scripts
cp fcst_script       ../ARCHIVE
cp get_ofs_data      ../ARCHIVE
```

Backup the "icp" programs:

```
cd /awips/hydroapps/lx/rfc/nwsrfs/icp/bin/RELEASE
cp icp               ../ARCHIVE
```

Backup the "icp" scripts:

```
cd /awips/hydroapps/lx/rfc/nwsrfs/icp/scripts
cp run_mcp3_remsh    ../ARCHIVE
```

Backup the "ens" programs:

```
cd /awips/hydroapps/lx/rfc/nwsrfs/ens/bin/RELEASE
```

```

cp batchbuilder.jar      ../ARCHIVE
cp ens_post              ../ARCHIVE
cp ens_post_cp          ../ARCHIVE
cp ens_pre              ../ARCHIVE
cp ens_pre_cp           ../ARCHIVE
cp ens_pre_s            ../ARCHIVE
cp espvs                ../ARCHIVE
cp print_ts             ../ARCHIVE
cp espadp               ../ARCHIVE
cp espts_conv           ../ARCHIVE

```

Backup the "ens" app-defaults files:

```

cd /awips/hydroapps/lx/rfc/nwsrfs/ens/app-defaults
cp espadp                ../ARCHIVE

```

Backup the "ens" scripts:

```

cd /awips/hydroapps/lx/rfc/nwsrfs/ens/scripts
cp bbuilder              ../ARCHIVE
cp ens                  ../ARCHIVE
cp espvs_generate.sh    ../ARCHIVE
cp run_espdata          ../ARCHIVE

```

Backup the "ffg" programs:

```

cd /awips/hydroapps/lx/rfc/nwsrfs/ffg/bin/RELEASE
cp ffguid                ../ARCHIVE
cp prodgen               ../ARCHIVE
cp zgrid                 ../ARCHIVE

```

Backup the "ofsde" programs:

```

cd /awips/hydroapps/lx/rfc/nwsrfs/ofsde/bin/RELEASE
cp ofsde                 ../ARCHIVE
cp ofsde.hp              ../ARCHIVE

```

Backup the "sys\_files" files:

```

cd /awips/hydroapps/lx/rfc/nwsrfs/sys_files
cp SHEFPARM              ../ARCHIVE

```

Backup the "xsets" programs:

```

cd /awips/hydroapps/lx/rfc/xsets/bin/RELEASE
cp xsets                 ../ARCHIVE

```

Backup the "xdat" programs:

```

cd /awips/hydroapps/lx/rfc/xdat/bin/RELEASE
cp ofstofs               ../ARCHIVE
cp outputbadobs          ../ARCHIVE
cp xdat                  ../ARCHIVE

```

Backup the "xnav" programs:

```

cd /awips/hydroapps/lx/rfc/xnav/bin/RELEASE
cp ffgoutput             ../ARCHIVE
cp make24hrxmrg          ../ARCHIVE
cp make6hrxmrg           ../ARCHIVE
cp makeXdaysxmrg        ../ARCHIVE
cp wfoqpf                 ../ARCHIVE
cp xnav                   ../ARCHIVE

```

Backup the "grib" programs:

```
cd /awips/hydroapps/lx/rfc/grib/bin/RELEASE
cp gribit ./.ARCHIVE
```

Backup the "idma" programs:

```
cd /awips/hydroapps/lx/rfc/idma/bin/RELEASE
cp idma ./.ARCHIVE
```

Backup the "idma" scripts:

```
cd /awips/hydroapps/lx/rfc/idma/scripts
cp runidma ./.ARCHIVE
cp lx/rfc/axverify_ob4-r25_20040317_tar ./.ARCHIVE
```

Backup the "public/bin" commands:

```
cd /awips/hydroapps/lx/public/bin
cp dd_options ./.ARCHIVE
cp remcmd_check_access ./.ARCHIVE
cp remcmd_user_init ./.ARCHIVE
cp remcmd_user_setup ./.ARCHIVE
```

2. Stop all crons which may start hydro applications on the Linux workstations.
3. Stop all hydro processes running on the Linux workstations.
4. Install the Linux versions of the release 25 executables.

All linux applications and data are installed in /awips/hydroapps

Move the lxrfc\_ob4-r25\_20040317\_tar.Z file to the /awips/hydroapps directory and expand the file.

You should make sure you have write permissions in the directories to which you are going to write.

```
zcat lxrfc_ob4-r25_20040317_tar.Z | tar xvf -
```

Note: you may want to change the ownership of the executable files after they're expanded to a user on your system - e.g. oper. You will want to do this for ofs, ifp, calb, icp, ens, util and x program bin directories. For example, as the root user:

```
cd rfc/nwsrfs/ofs/bin
chown -R oper:users *
```

5. Integrate the changes you have made to the ifp script fcst\_script into the new version. You should not simply overwrite the new version because the new version includes updates to replace the rsh command with ssh. The AWIPS program will be removing the rsh commands from AWIPS computers in ob4.
6. Insert the following apps-defaults token definition line into your Apps-defaults site file, (as specified by the environment variable APPS\_DEFAULTS\_SITE):

```
ens_scripts : $(ens_dir)/scripts
ens_pre_griddb : $(FXA_DATA)/Grid/SBN/netCDF/CONUS211/CPCoutlook
ens_log_dir : $(ens_output)/$(ofs_level)
ens_msglog_level : 5
```

mcp3\_icp\_iface : /tmp/\$(LOGNAME)/mcp3\_ntrfc

These tokens will be updated in the National Apps-defaults files with the AWIPS OB4 release.

7. Restart the crons or processes which were stopped in steps 5 and 6, above, as needed.

## 8. THIS IS AN OPTIONAL STEP

If you want to test these OFS and IFP executables before making them available to the whole RFC you should reset the following system-wide .Apps\_defaults or site .Apps\_defaults\_site tokens to point to the ARCHIVE directories so the people running programs while you are testing are using the old executables:

```
calb_rls      : $(calb_bin)/ARCHIVE
ifp_bin_dir   : $(ifp_dir)/bin/ARCHIVE
ifp_nwsrfs_bin_dir : $(ifp_dir)/bin/ARCHIVE
icp_rls      : $(icp_dir)/bin/ARCHIVE
ens_rls      : $(ens_dir)/bin/ARCHIVE
ofs_rls      : $(ofs_dir)/bin/ARCHIVE
ffg_rls      : $(ffg_dir)/bin/ARCHIVE
grib_rls     : $(grib_dir)/bin/ARCHIVE
xdat_rls     : $(xdat_dir)/bin/ARCHIVE
xnav_rls     : $(xnav_dir)/bin/ARCHIVE
xsets_rls    : $(xsets_dir)/bin/ARCHIVE
```

After you are done testing make sure to change the system-wide .Apps\_defaults or site .Apps\_defaults\_site (whichever you changed) tokens back to the RELEASE directories.

9. Test the new executables to make sure everything runs as expected.

## HP SYSTEM INSTALLATION [\(Back to Top\)](#)

Only an HP version of the ofsde executable is included in this delivery. To install this new executable, do the following:

1. Backup the existing executable and install the new one:

```
cd /awips/hydroapps/rfc/ofsde/bin/RELEASE
cp ofsde ../ARCHIVE/ofsde
mv /awips/hydroapps/lx/rfc/ofsde/bin/RELEASE/ofsde.hp ofsde
```

If the /awips/hydroapps/lx/rfc and /awips/hydroapps/rfc directory structures are not both visible, then it will be necessary to perform the "mv" command above via an ftp.

=====

INSTALL NOTES FOR VERIFY SOFTWARE ON THE ARCHIVE MACHINES [\(Back to Top\)](#)

=====

The verify program in release ob3 and earlier was designed to run on the AWIPS platform, using the IHFS and verification databases. For ob4, this software has been rewritten in order to operate on the ax machines and use the archive database. Other changes include greater user control over the pairing and statistical calculation mechanisms and a more efficient forecast-observed data pairing algorithm.

To install the new software, do the following:

1. Log-in to an AWIPS workstation.
2. Ftp the file /awips/hydroapps/lx/rfc/axverify\_ob4-r25\_20040317\_tar onto the ax machine and place it in the directory /rfc\_arc:

```
cd /awips/hydroapps/lx/rfc
ftp ax
user: (the user who owns the rfc_arc directory)
password:
cd /rfc_arc
binary
put axverify_ob4-r25_20040317_tar
quit
```

3. Log-in to the ax machine as the user who owns the /rfc\_arc directory.
4. Untar the file:

```
cd /rfc_arc
tar -xvf axverify_ob4-r25_20040317_tar
```

5. The archive database must be updated, by deleting two tables and creating one. To do so, execute the following:

```
cd /rfc_arc/verify/scripts
run_adb_commands
```

6. Setup the following apps-defaults tokens in your AX site file, which is indicated by the APPS\_DEFAULTS\_SITE on the ax:

```
vsys_dir : /rfc_arc/verify
vsys_input : $(vsys_dir)/input
vsys_output : $(vsys_dir)/output
vsys_scripts : $(vsys_dir)/scripts
verify_rls : $(vsys_dir)/bin/RELEASE
vsys_rls : $(verify_rls)
vsys_debug : 1
```

After Step 6, installation is complete. The new verification software should be ready for execution. Make sure to read the release notes and the section on apps-defaults tokens in the user's manual (<http://www.nws.noaa.gov/oh/hrl/verification/verification.php>) prior to executing any portion of the new verification software. There may be some additional steps required to setup a user to have access to the archive database.

```
=====
CONTACT INFORMATION    (Back to Top)
=====
```

If there are any questions, Please contact the HSD RFC support team.